

AMENDMENTS TO THE CLAIMS

1-68 (canceled)

69. (currently amended) A layered composite material comprising a layer of a first alloy species of an alloy, the first alloy species having first alloy species properties and consisting essentially of a first alloy phase, and further comprising a layer of a second alloy species of the alloy, the second alloy species having second alloy species properties and consisting essentially of a second alloy phase, wherein the first alloy species properties are distinguishable from the second alloy species properties, wherein the alloy is comprised of gold and tin, wherein the first alloy phase is Au₅Sn and the second alloy phase is AuSn and wherein the layered composite material is comprised of a plurality of layers of each of the first alloy species and the second alloy species.

70 - 72. (canceled)

73. (currently amended) The layered composite material as claimed in claim ~~72~~ 69 wherein the first alloy phase has a first alloy phase composition, wherein the second alloy phase has a second alloy phase composition, and wherein the first alloy phase composition is different from the second alloy phase composition.

74 - 75. (canceled)

76. (currently amended) The layered composite material as claimed in claim ~~75~~ 73 wherein the material has a composite material composition and wherein the composite material composition is comprised of between about 25 at % tin and about 40 at % tin.

77. (original) The layered composite material as claimed in claim 76 wherein the composite material composition is comprised of between about 27 at % tin and about 35 at % tin.

78. (original) The layered composite material as claimed in claim 77 wherein the composite material composition is comprised of about 30 at % tin.

79. (original) The layered composite material as claimed in claim 77 wherein the composite material composition is a eutectic composition.

80. (canceled)

81. (new) A layered composite material comprising a layer of a first alloy species of an alloy, the first alloy species having first alloy species properties and consisting essentially of a first alloy phase, and further comprising a layer of a second alloy species of the alloy, the second alloy species having second alloy species properties and consisting essentially of a second alloy phase, wherein the first alloy species properties are distinguishable from the second alloy species properties and wherein the alloy is comprised of gold and tin.

82. (new) The layered composite material as claimed in claim 81 wherein the layered composite material is comprised of a plurality of layers of each of the first alloy species and the second alloy species.

83. (new) The layered composite material as claimed in claim 81 wherein the first alloy phase is Au_5Sn and wherein the second alloy phase is AuSn .

84. (new) The layered composite material as claimed in claim 82 wherein the first alloy phase has a first alloy phase composition, wherein the second alloy phase has a second alloy phase composition, and wherein the first alloy phase composition is different from the second alloy phase composition.

85. (new) The layered composite material as claimed in claim 82 wherein the material has a composite material composition and wherein the composite material composition is comprised of between about 25 at % tin and about 40 at % tin.

86. (new) The layered composite material as claimed in claim 85 wherein the composite material composition is comprised of between about 27 at % tin and about 35 at % tin.

87. (new) The layered composite material as claimed in claim 86 wherein the composite material composition is comprised of about 30 at % tin.

88. (new) The layered composite material as claimed in claim 86 wherein the composite material composition is a eutectic composition.

89. (new) The layered composite material as claimed in claim 88 wherein the first alloy phase is Au_5Sn and wherein the second alloy phase is AuSn .
